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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,721

Applicant(s)

Gregg et al.

Examiner

Ula Corinna Ruddock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 3, 2003
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17, 18, 20-28, and 61-64 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 18, 20-28, and 61-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendments and accompanying remarks filed April 3, 2003. The rejections in view of EP 503383 and WO 95/11357 have been overcome.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

3. The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

4. Claims 17, 18, 20, 21, 25, 26, and 61-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over P.E. Dinkel (US 3,284,980) in view of Huege et al. (US 6,395,205). Dinkel discloses a hydraulic cement panel with low density core and fire reinforced high density surface layers. The panel is formed with a core of lightweight aggregate and Portland cement and is covered on each of the two principal surfaces with a skin membrane of glass fiber mesh (col 2, ln 61-66). The mesh layer is typically coated with a vinyl resin (col 3, ln 13-45). The core is cellular in nature (col 3, ln 71-75 to col 4, ln 1-2), which the Examiner is equating it to the aerated concrete core of the present invention. The core has a weight of 40 to 70 pounds per cubic foot (col 4, ln 7-

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8) and the panel can have a thickness of from 1/4 inch to 1 inch (col 6, ln 50-51). According to Figure 1, the panel is generally rectangular as required by the present invention and inherently has opposing side edges and a pair of opposing end edges. Dinkel fails to disclose that the aerated concrete is autoclaved.

Huege et al. (US 6,395,205) disclose that the production of autoclaved aerated concrete is well-established (col 1, ln 22-23). The concrete is placed in an autoclave to build strength, rigidity, and durability (col 1, ln 34-36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used Huege's autoclaving method on the cellular concrete of Dinkel, motivated by the desire to obtain concrete having increased strength, rigidity, and durability.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of Lawlis et al. (US 4,065,333). Dinkel and Huege et al. disclose the claimed invention except for the teaching that the surface has beveled portions. Lawlis et al. disclose a wallboard having side edges each having a flat portion and also a beveled portion adjacent the front face (col 1, ln 67-68 to col 2, ln 1). It would have been obvious to have beveled the edges of the surface of Dinkel and Huege et al. as taught by Lawlis et al. motivated by the desire to obtain a panel that results in ease of handling and installation.

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5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of Green et al. (US 5,552,187). Dinkel and Huege et al. (US 6,395,205) disclose the claimed invention except for the teaching that the moisture-resistant resin face layer extends around the opposing side edges. Green et al. disclose a coated fibrous mat-faced gypsum board that has coating applied to the surface of the fibrous mat which is sufficient to embed the mat completely in the coating (col 10, ln 1-4). It should be noted that the Examiner is equating Green's disclosure of the coating completely embedding the fibrous mat to Applicant's disclosure that the resin face layer extends around the opposing side edges because by completely embedding the fibrous mat with a coating, the side edges of the fibrous mat would be embedded as well. Therefore, it would have been obvious to one having ordinary skill in the art to have used Green's method of completely embedding the fibrous mat (i.e. extending the face layer around the opposing edges) on the panel of Dinkel and Huege et al., motivated by the desire to obtain a panel that is completely protected from moisture and deterioration.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of Ensminger et al. (US 5,221,386). Dinkel and Huege et al. disclose the claimed invention except for the teaching that the opposing end edges of the core are exposed. Ensminger et al. disclose a cement board having

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reinforced edges. Ensminger et al. disclose cutting away the mat from the border regions of the upper composite web (col 3, ln 3-5), which the Examiner is equating to the disclosure by the present invention of opposing end edges of the core being exposed. It would have been obvious to one having ordinary skill in the art to cut away the mat from the border regions of the upper composite web as taught by Ensminger et al. on the panel of Dinkel and Huege et al. motivated by the desire to improve adhesive bonding between the core and the moisture-resistant material..

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of Restrepo (US 4,407,676). Dinkel and Huege et al. disclose the claimed invention except for the teaching that the core further comprises reinforcing fibers in the aerated concrete. Restrepo discloses fiber-reinforced cement. The lightweight concrete is known as aerated concrete (col 3, ln 22-24). Plastic fibers are used to reinforce the cementitious matrix (col 4, ln 17-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the reinforcing plastic fibers of Restrepo in the core of Dinkel and Huege et al., motivated by the desire to obtain a concrete core with increased resistance to tensile loads and impact loading.

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of King (US 5,002,620). Dinkel and Huege et al. disclose the claimed invention except for the teaching that the core

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comprises first and second portions aligned in end-to-end relation at respective opposing edges thereof and that an adhesive layer joins the opposing edges of the first and second portions together. King disclose fiber-reinforced cellular concrete. The finished sheets of concrete are then cut to a desired length and the lightweight fractions from opposed sheets are bonded together in sandwich form. A suitable resin is disposed between the opposed lightweight fractions (col 4, In 12-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used King's method of bonding the finished opposed sheets with a suitable resin on the panel of Dinkel and Huege et al., motivated by the desire to obtain a panel that can be easily manufactured and transported.

Response to Arguments

9. Applicant's arguments with respect to claims 17-28 and 61-64 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is (703) 305-0066. The Examiner can normally be reached Monday through Thursday from 6:30 AM to 5 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor Terrel Morris can be reached at (703) 308-2414.

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Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-2351.

Ula C. Ruddock *UCR*
Patent Examiner
Art Unit 1771
April 21, 2003

Ula Ruddock